**Office of the President** Northwestern University
Rebecca Crown Center
633 Clark Street
Evanston, Illinois 60208-1100

nu-president@northwestern.edu
Phone 847-491-7456
Fax 847-467-3104

NORTHWESTERN
UNIVERSITY

October 24, 2006

The Honorable Tom Coburn
United States Senate
172 Russell Senate Office Building
Washington, D.C. 20510-3604

Dear Senator Coburn:

I write to follow up on our recent correspondence with regard to Congressionally directed appropriations at Northwestern University. Attached is a list of such appropriations since 2000 and an accompanying summary of those projects as requested in your letter of July 27, 2006. As noted in my earlier response, Northwestern applies the same rigorous standards to "earmarked" projects as we do to peer-reviewed research projects, and we work closely with all of our sponsors to achieve the outcomes required by those sponsors, whether those sponsors are public agencies or private foundations, in order to further scientific discovery, promote economic growth in Illinois and the Midwest, and improve the health and security of the American people. Between 1998 and 2003, sponsored research at Northwestern grew by 79 percent, in recognition of the important contributions Northwestern University is making in fields such as medicine, engineering, science, and technology. The *Office for Research Annual Report 2005* (Internet accessible at http://www.research.northwestern.edu/research/pdfs/AR2005.pdf), details the many ways Northwestern University's research benefits the public.

Congressional earmarks represent only a small portion of Northwestern University's federal research funding. In 2005, the most recent year for which complete data is available, Northwestern received a total of almost $303 million from agencies of the U.S. government, of which only $6.5 million, or 2 percent, came through earmarks, with the vast majority awarded through competitive or peer-reviewed processes. Though representing only a small percentage of our federal funding, earmarks can play an important strategic role. At Northwestern, we have requested funds from Congress for several important scientific research buildings, such as the Lurie and Pancoe research buildings described in my attachment. It is important to note that—outside of earmarks—the federal government provides very little in the way of funding for research *facilities*. As described in the attachment, researchers in the Lurie and Pancoe buildings perform significant research for the federal government, and the investment that Congress made in those buildings was highly leveraged with funding from private sources and, in the case of the Lurie building, by significant funding from the State of Illinois.

Northwestern University has a strict policy regarding earmarks, insofar as only the President is permitted to make funding requests of elected officials, including the Illinois Congressional Delegation. As President, I have made all these requests personally and have limited such requests to a handful of projects that have strategic importance to the University and have a clear public benefit. My staff includes two full-time government relations professionals, who are Northwestern University employees and are registered lobbyists at the federal and state levels. Only a small part of their time, however, is devoted to appropriations matters. Northwestern University also retains consultants in both Washington and Springfield, Illinois, for legislative counsel on the full breadth of legislative issues involving Northwestern and federal and state government, such as student financial aid, research funding, economic development, technology transfer, graduate and professional education and licensing, health and safety, regulation and licensing, etc. Northwestern University frequently partners with other colleges and universities, especially those in Illinois, on a wide range of matters addressing state and federal government, although this cooperation seldom involves seeking Congressional earmarks. Northwestern's policy on earmarks would not preclude such partnering, however, if a project had strategic importance to the University and offered a clear public benefit to taxpayers in our State or region, or to the greater good of the nation.

Please let me know if you have further questions regarding federal research funding at Northwestern University.

Sincerely,

Henry S. Bienen
President

Attachment

Attachment, Page 1

| Project | Agency | FY 2000 | FY 2001 | FY 2002 | FY 2003 | FY 2004 | FY 2005 | FY 2006 |
|---|---|---|---|---|---|---|---|---|
| **Pancoe-Evanston Northwestern Healthcare Life Sciences Pavilion** | HRSA | $3,750,000 | $3,450,000 | $100,000 | $600,000 | $725,000 | $800,000 | $0 |
| **IBNAM at Robert H. Lurie Medical Research Center** | Army and TATRC | $0 | $4,000,000 | $5,000,000 | $5,000,000 | $2,500,000 | $1,000,000 | $1,000,000 |
| **Chemistry of Life Processes Building** | NASA | $0 | $0 | $0 | $900,000 | $500,000 | $500,000 | $1,000,000 |
| **Juvenile Study** | Justice | $0 | $0 | $0 | $0 | $600,000 | $800,000 | $0 |
| **Defense Nanotechnologies** | DARPA | $0 | $0 | $0 | $1,000,000 | $0 | $0 | $0 |
| **Research Instrumentation for IBNAM** | Energy, Office of Science | $0 | $0 | $0 | $0 | $1,000,000 | $0 | $0 |
| **Nanoscale Organic Spintronics Program** | DARPA | $0 | $0 | $0 | $0 | $0 | $1,400,000 | $0 |

**Pancoe-Evanston Northwestern Healthcare Life Sciences Pavilion**
The Arthur and Gladys Pancoe-Evanston Northwestern Healthcare Life Sciences Pavilion, located on the Evanston campus, houses Northwestern University's Center for Genomics and Molecular Medicine. The facility is a collaboration between Northwestern University and Evanston Northwestern Hospital, and focuses on four areas in the life sciences: genomics, cell biology, neurobiology, and developmental biology. Total cost for the Pancoe building was $75 million. Approximately $16 million came from federal earmarks. The remainder came from private sources.

The new Center provides space for approximately 28 research groups in state-of-the-art laboratories, and makes it possible for approximately 30 principle investigators from Northwestern University and Evanston Hospital to work together to advance biomedical research, improve health care, and increase technology transfer to the biotechnology industry. Researchers in Pancoe perform research, important to the nation, much of it sponsored by the National Institutes of Health and other federal agencies. The Pancoe Building was Northwestern's first effort to utilize an equipment corridor design and flexible casework table systems, and the vivarium contained within the facility has been recognized for its innovative air distribution system.

**IBNAM at the Robert H. Lurie Medical Research Center**
IBNAM comprises the 10th and 11th floors of the Robert H. Lurie Medical Research Center, located on Northwestern's Chicago campus. IBNAM applies nanotechnology to important health priorities of the U.S. government. The facilities for the Institute include five major laboratories with state-of-the-art equipment, providing a unique infrastructure that teams scientists, engineers, and medical doctors in order to advance and apply nanotechnology to healthcare, including the medical needs of the U.S. military.

Northwestern University is an acknowledged leader in nanotechnology research, and faculty members have published, patented, and applied numerous research discoveries in nanotechnology. With the help of both federal and state government, as well as significant private funding, the Lurie building, comprised of over 418,000 square feet, is now complete. Researchers in the Lurie building bring Illinois an estimated $76 million in research funding annually. The total cost of the building was approximately $163,000,000, of which $18.5 million came from Congressional earmarks for the IBNAM facilities. This cutting-edge research space is making important contributions to healthcare in the U.S. military and has stimulated technology transfer to industry in the health sector. IBNAM researchers have also started technology companies based on IBNAM research. In 2005, the Lurie building won the Midwest Construction Magazine award.

**Chemistry of Life Processes Building/ Proteomics and Nanobiotechnology**
Comprised of 76,000 assignable net square feet and 147,000 gross square feet, this building will serve as a premier research facility for Northwestern's Evanston campus, bringing together two emerging areas of science: proteomics and nanobiotechnology. Of the estimated total project cost of $75 million to $81 million, 80 percent will be raised from private sources. Federal funding (approximately $2.7 million, to date) will help with the construction of this building, which should be completed by mid-2009. Upon completion, this facility will house 245 investigators, researchers, and staff, focusing on nanobiotechnology, chemistry, and other physical sciences at the nanoscale.

Northwestern University is also planning on attaining a silver LEED certificate (Leadership in Energy and Environmental Design) for the Proteomics building. The silver LEED certificate is the third highest given by the U.S. Green Building Council, the nation's leader in certification of sustainable buildings, which

promotes "a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality."

**Juvenile Study**
The Juvenile Study is a large-scale, longitudinal study of health needs and outcomes of delinquent youth. This is a unique study that has generated its own findings and provides extensive data for a wide range of federally supported research programs and projects on such topics as juvenile justice, substance abuse, healthcare, health disparities, and other issues of national importance. The Juvenile Project has been cited extensively in other federally funded research projects. Lead researchers for the initiative have been invited to participate in White House Symposia on juvenile issues, and published numerous articles in scientific peer-reviewed journals.

**Defense Nanotechnologies**
This project developed new materials and devices targeted toward the needs of the defense community. Northwestern has one of the largest concentrations of expertise in solar energy conversion and storage of any university worldwide, and has assembled a group of world-class researchers and significant resources in the field of nanotechnology. Research funding helped to develop power sources that will be extremely lightweight, efficient, and rechargeable/renewable, such as new infrared photochromic materials that use conducting polymers to down-convert absorbed radiation to wavelengths longer than 12 nanometers, which would render an object essentially invisible to current night vision equipment.

**Research Instrumentation for IBNAM**
To defray the cost of research instrumentation (equipment) for use by IBNAM, Northwestern University received federal funds to develop its expertise to a wide range of health issues, specifically, research and development at the nanoscale (i.e., at the level of atoms, molecules, and super molecular structure). Nanostructures can be used in the future for such medical purposes as the controlled release of medications at the molecular level, non-invasive surgery, the rapid healing of wounds, and regeneration of human tissues. Northwestern has played an important role in the national development of these technologies, and its faculty have published, patented, and applied numerous research discoveries in this field. This particular federal funding was well leveraged by other private and public investments.

**Nanoscale Organic Spintronics Program**
This project specifically addresses current defense needs in data encryption and security, in the emerging field of nano-electronics, and has far-reaching implications for the future security and economic well-being of the United States. Nano-electronics is one of the "Grand Challenges" of the National Nanotechnology Initiative, proposed by the President and enacted by Congress in 2003. With the aid of federal funding, Northwestern researchers developed and demonstrated organic spintronic technology, which helped initiate a new program by DARPA. This technology led to a new generation of "spintronic" devices, which are smaller, more versatile, and more robust than those currently making up silicon chips and circuit elements. Spintronics shows promise to provide truly disruptive new technologies for information processing and data encryption for national security.